SECTION 5

5.03 SIZING OF DISTRIBUTION MAINS:

All mains shall be sized large enough to provide for domestic, irrigation, and fire protection flows to the area requesting service. The maximum acceptable headloss for 6, 8, and 12 inch mains is 2 feet per 1,000 feet of main for the maximum hour flow and using a C value of 130. The 2 feet per 1,000 feet of main does not apply under fire flow conditions. Denver Water reserves the right to size mains to provide service for future needs.

All new mains shall be of one of the standard sizes set by Denver Water. Standard sizes are 6 inch, 8 inch, and 12 inch mains. Mains smaller than 6 inches may be used in some cul-de-sacs if approved by Denver Water.

The sizing of Distribution Mains follows a standardized grid based upon careful consideration and analysis of results of distribution system studies utilizing network simulation. This grid requires a 12 inch main every half mile with alternating 6 inch and 8 inch mains in the streets within the quarter section and a 6 inch or 8 inch main in the street at approximately the 1/16 line to eliminate half mile runs in the system. See Sheet 9 of the Standard Drawings for a typical grid layout.

In residential areas the main shall be 8 inches in diameter. Six inch diameter pipe may be used where it completes a grid, but it is not to be used in blocks more than 600 feet in length unless approved by Denver Water. Four inch mains may be acceptable in cul-de-sacs serving only 6 taps or less.

In business and industrial areas an 8 inch main is used only where it completes a grid. Twelve inch mains are used for long runs not interconnected.

Planned building groups are treated the same as industrial or business areas because of the high fire risk, the large number of long single feeds and the minimal intersection of mains.

In adherence to the recommendations of the Insurance Services Offices, for economic reasons and as a fire service obligation, looping shall be done in conjunction with the main extension.

The present sizing of the grid system has the benefit of utilizing the system as an integral part of the overall transmission system in that water is distributed without excessive headloss. Denver Water shall analyze grid systems for developing areas to determine their adequacy. Parallel mains are not allowed.